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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/763,409	Applicant(s) DUGGI ET AL.	
	Examiner Shick C. Hom	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 13-15 of the remarks, filed 10/1/07, with respect to the rejections of claims 1-5 and 10-15 under Stanforth et al. and claims 6-10 and 16-20 under Stanforth et al. in view of Larsson et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sahinoglu et al.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 11 is rejected under 35 U.S.C. 102(e) as being anticipated by Sahinoglu et al. (2005/0036486).

Sahinoglu et al. disclose for use in a mobile ad hoc network formed by a plurality of mobile ad hoc network (MANET) nodes (paragraph 0002 recite the network of mobile nodes), a method of aggregating in a first MANET node route cost information associated with a first route from a source MANET node to a destination MANET node (paragraph 0032 recite the intermediate nodes storing the cost information and the abstract recite the route from the source node to the destination node whereby the source node generates information for the purpose of calculating the cost of the route), the method comprising the steps of:

wirelessly communicating with other ones of the plurality of MANET nodes (paragraph 0020 recite each of the wireless node includes a transceiver); and

receiving in the first MANET node a Route Request (RREQ) message generated by the source MANET node;

retrieving initial route cost information from the RREQ message, the initial route cost information comprising at least one of:

at least one radio frequency (RF) link cost parameter of at least one preceding RF link between the first MANET node and the source MANET node in the first route; and at least one node cost parameter of at least one preceding MANET node between the first MANET node and the source MANET node in the first route (paragraphs 0038-0039 recite the RREQ packet, including route cost information, generated by the source node, the costs accrued through the intermediate node, and arriving at the destination node and paragraph 0032 recite the RREQ including the cost for the route clearly anticipate the link cost as claimed).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sahinoglu et al. (2005/0036486).

Regarding claim 1:

Sahinoglu et al. disclose for use in a mobile ad hoc network formed by a plurality of mobile ad hoc network (MANET) nodes (paragraph 0002 recite the network of mobile nodes), a first MANET node capable of aggregating route cost information associated with a first route from a source MANET node to a destination MANET node (paragraph 0032 recite the intermediate nodes storing the cost information and the abstract recite the route from the source node to the destination node whereby the

source node generates information for the purpose of calculating the cost of the route), said first MANET node comprising:

a radio frequency (RF) transceiver capable of wirelessly communicating with other ones of said plurality of MANET nodes (paragraph 0020 recite each of the wireless node includes a transceiver); and

a means capable of receiving incoming data packets from said RF transceiver and sending outgoing data packets to said RF transceiver, wherein said means receives a Route Request (RREQ) message generated by said source MANET node and retrieves initial route cost information from said RREQ message, said initial route cost information comprising at least one of:

at least one radio frequency (RF) link cost parameter of at least one preceding RF link between said first MANET node and said source MANET node in said first route; and

at least one node cost parameter of at least one preceding MANET node between said first MANET node and said source MANET node in said first route (paragraphs 0038-0039 recite the RREQ packet, including route cost information, generated by the source node, the costs accrued through the intermediate node, and arriving at the destination node and paragraph 0032 recite

the RREQ including the cost for the route clearly anticipate the link cost as claimed).

Regarding claims 3 and 13:

Sahinoglu et al. disclose wherein said means stores said initial route cost information retrieved from said RREQ message in a route table associated with said first MANET node (paragraph 0033 recite storing cost information in a table).

Regarding claims 4 and 14:

Sahinoglu et al. disclose wherein said means updates said initial route cost information in said RREQ message by adding to said initial route cost information at least one of: an RF link cost parameter associated with an RF link to an immediately preceding MANET node between said first MANET node and said source MANET node in said first route; and a first node cost parameter associated with said first MANET node (paragraph 0038 recite the RREQ message including accruing cost).

Regarding claims 5 and 15:

Sahinoglu et al. disclose wherein said means forwards said RREQ message containing said updated route cost information to a next MANET node between said first MANET node and said destination MANET node in said first route (paragraph 0050

recite the AccCost being updated as the RREP packet is forwarded).

Regarding claims 6 and 16:

Sahinoglu et al. disclose wherein said means further receives a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising at least one of: at least one RF link cost parameter of at least one preceding RF link between said first MANET node and said destination MANET node in said first route; and at least one node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route (paragraph 0032 recite the route reply RREP packet from the destination node).

Regarding claims 9-10 and 19-20:

Sahinoglu et al. disclose wherein said means updates said initial route cost information in said RREP message by adding to said initial route cost information at least one of: an RF link cost parameter associated with an RF link to an immediately preceding MANET node between said first MANET node and said destination MANET node in said first route; and a first node cost parameter associated with said first MANET node and wherein

said controller forwards said RREP message containing said updated route cost information to a next MANET node between said first MANET node and said source MANET node in said first route (paragraph 0050 recite the AccCost being updated as the RREP packet is forwarded).

Sahinoglu et al. disclose all the subject matter of the claimed invention with the exception of wherein means capable of receiving incoming data packets being a controller as in claim 1; wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node as in claims 2, 12; wherein said at least one RF link cost parameter in said RREP message is a zero value and said at least one node cost parameter in said RREP message is a zero value if said first MANET node receives said RREP message directly from said destination MANET node as in claims 7, 17; and wherein said controller stores said initial route cost information retrieved from said RREP message in said route table as in claim 8, 18.

Ebata et al. from the same or similar fields of endeavor teach that it is known to provide means capable of receiving incoming data packets being a controller (paragraph 0029 recite

the control module) as in claim 1; wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node as in claims 2, 12; wherein said at least one RF link cost parameter in said RREP message is a zero value and said at least one node cost parameter in said RREP message is a zero value if said first MANET node receives said RREP message directly from said destination MANET node as in claims 7, 17; and wherein said controller stores said initial route cost information retrieved from said RREP message in said route table (paragraph 0005 recite the cost metric being initially set to zero) as in claim 8, 18.

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to use provide controller capable of receiving incoming data packets as in claim 1; wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node as in claims 2, 12; wherein said at least one RF link cost parameter in said RREP message is a zero value and said at least one node cost

parameter in said RREP message is a zero value if said first MANET node receives said RREP message directly from said destination MANET node as in claims 7, 17; and wherein said controller stores said initial route cost information retrieved from said RREP message in said route table as in claim 8, 18 as taught by Ebata et al. in the communications network and method of Sahinoglu et al.

The means capable of receiving incoming data packets being a controller; wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node; wherein said at least one RF link cost parameter in said RREP message is a zero value and said at least one node cost parameter in said RREP message is a zero value if said first MANET node receives said RREP message directly from said destination MANET node; and wherein said controller stores said initial route cost information retrieved from said RREP message in said route table can be implemented by connecting the controller of Ebata et al. to the nodes of Sahinoglu et al. and setting the link cost parameter to zero in Sahinoglu et al. The motivation for connecting the controller and setting the link cost parameter to zero in Sahinoglu et al.

as taught by Ebata et al. being that it provides more efficiency in the design of the system since the system uses known controller means for receiving incoming packets and setting the initial link cost parameter to zero at the source node.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park et al. disclose an apparatus and method for setup of optimum route using tree-topology.

Lindskog et al. disclose a method for multihop routing for distributed WLAN networks.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pham Chi can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER

12/13/07



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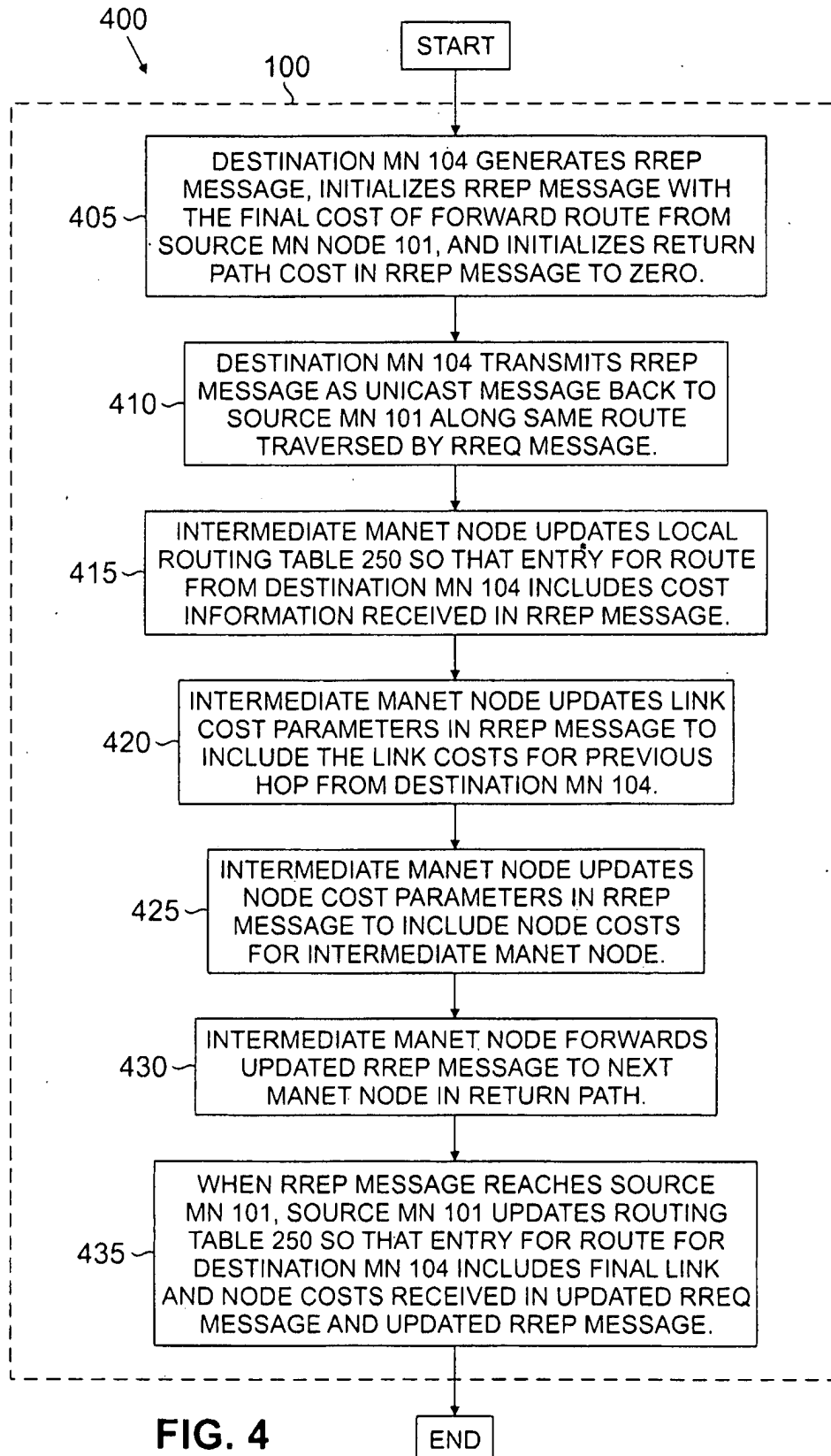


FIG. 4

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